

# Application of multi-agent system for control of parameters of precision stamping process of bevel gears

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## Abstract

© Published under licence by IOP Publishing Ltd. The article deals with the possibility of using an intelligent control system for the parameters of the technological process of precision stamping and mechanisms of crank hot-stamping presses.

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## References

- [1] Berheev M M and Zalyaev I A 1988 Fundamentals of Computer Aided Design Systems (Ucheb. Posobie pod redakciej Yu. V. Kozhevnikova. - Kazan': izd. KGU) 253
- [2] Makarov I M, Lohin I M, Manko S V and Romanov M P 2006 Artificial Intelligence and Intelligent Control Systems (M.: Nauka) 214-17
- [3] Morozov V K and Rogochev G N 2011 Modeling of information and dynamic systems (M.: Akademiya) 127-129
- [4] Gavariyev R V, Savin I A and Leushin I O 2016 Impact of the functional coating on service durability of injection molds for the zinc alloys pressure casting (Tsvetnye Metally) 66-70
- [5] Gavariyev R V, Savin I A and Leushin I O 2017 Improvement of zinc castings surface quality by laminated protective coating Tsvetnye Metally 84-88
- [6] Gavariyev R V and Savin I A 2017 Improvement of surface quality of casting produced by casting under pressure Solid State Phenomena 988-993
- [7] Pankratov D L, Gavariyev R V and Gavarieva K N 2016 Influence of multilayer coatings on the operational stability of molds for injection molding IOP Conference Series: Materials Science and Engineering 134 012031
- [8] Gavarieva K N, Simonova L A, Pankratov D L and Gavariyev R V 2017 Development of expert systems for modeling of technological process of pressure casting on the basis of artificial intelligence IOP Conference Series: Materials Science and Engineering 240 012019
- [9] Shaparev A V and Savin I A 2017 Calculation of joint plastic deformation to form metal compound in cold condition (Solid State Phenomena) 313-18
- [10] Shaparev A V and Savin I A 2016 Calculation of the amount of the reduction required for the formation of compound layers during cold rolling of bimetals Materials Science Forum 328-333
- [11] Safronov N N, Mingaleeva L B and Savin I A 2018 Optimization of charge material composition in shs process with ferrosilide fabrication from gaseous wastes of metallurgical production Chernye Metally 53-59